

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-010399**Date Inspected:** 16-Nov-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Guo Yan Fei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Crossbeams**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

**OBG CROSS BEAM CB9**

This QA observed ZPMC qualified welding personnel identified as 053742, 053609 and 058174 perform FCAW welding on weld joint identified as CB202B-009-003. ZPMC QC identified as Mr. Liu Chuan Gang was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2231-B-U2-F.

This QA observed ZPMC qualified welding personnel identified as 067571 perform SMAW welding on weld joint identified as FB204-023-053. ZPMC QC identified as Mr. Liu Chuan Gang was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-P-2214-B-U2.

This QA observed ZPMC qualified welding personnel identified as 067942 perform SMAW welding on weld joint identified as FB204-024-054. ZPMC QC identified as Mr. Liu Chuan Gang was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-P-2214-B-U2.

**OBG CROSS BEAM CB11**

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This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG CROSS BEAM CB13

This QA observed ZPMC qualified welding personnel identified as 053486 perform FCAW welding on weld joint identified as CB202A-013-014. ZPMC QC identified as Mr. Gou Yan Fei was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2232-Tc-U4b-F.

This QA observed ZPMC qualified welding personnel identified as 054459 perform FCAW welding on weld joint identified as CB202G-040-161. ZPMC QC identified as Mr. Gou Yan Fei was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2133.

This QA observed ZPMC qualified welding personnel identified as 221795 perform FCAW welding on weld joint identified as CB202A-037-161. ZPMC QC identified as Mr. Gou Yan Fei was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2133.

### OBG CROSS BEAM CB14

During random in process inspection of weld joint fit up this QA observed weld joint preparations and root openings that did not appear to comply with the contract documents. 5mm is the maximum root opening allowed for Complete Joint Penetration (CJP) welds and the cut edges to be welded shall be free of notches and other injurious defects that may affect the quality of the weld. The following is a list of the joint numbers and discrepancies observed:

1. FB204-044-053; root opening = 10mm, cut edge of one bevel exhibited excessive notches. (See attached photos)
2. FB204-044-087; root opening = 11mm, cut edge of one bevel exhibited excessive notches. (See attached photos)
3. FB204-043-088; root opening = 10mm (See attached photos)
4. FB204-043-054; root opening = 12mm (See attached photos)
5. FB204-042-054; root opening = 10mm
6. FB204-041-054; root opening = 9mm

ZPMC QC inspector and ABF QA inspector in this bay are aware of these discrepancies and informed this QA that the weld joints would be repaired prior to welding. The attached photos concerning these joints are for the purpose of capturing the in-process workmanship being performed on this crossbeam.

### OBG CROSS BEAM CB15

This QA observed ZPMC personnel preparing the bottom panel to be incorporated into the crossbeam assembly. No other significant work was observed on this crossbeam during the time QA was present.

### OBG CROSS BEAM CB16

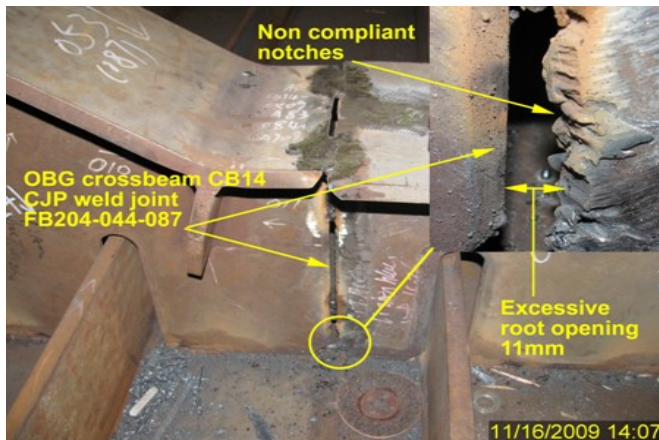
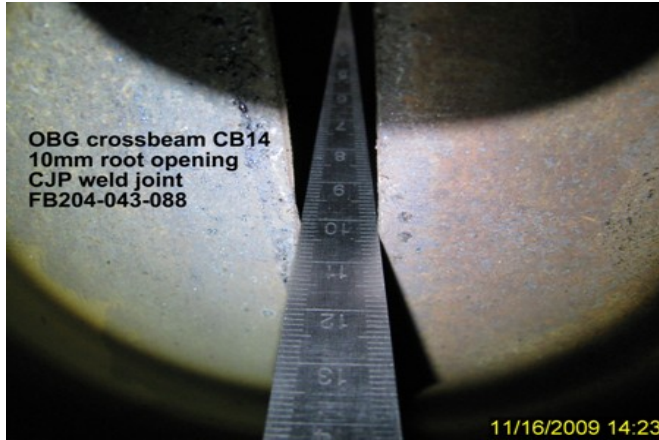
This QA observed that no significant work was being performed on this crossbeam during the time QA was

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present.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



## Summary of Conversations:

As mentioned above.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang (15000422372), who represents the Office of Structural Materials for your project.

**Inspected By:** Hall, Steven  
**Reviewed By:** Patterson, Rodney

Quality Assurance Inspector  
QA Reviewer